KATHOLIEKE
UNIVERSITEIT
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DEPARTEMENT TOEGEPASTE ECONOMISCHE WETENSCHAPPEN

RESEARCH REPORT 0301

ADVERTISING BUDGETING PRACTICES OF BELGIAN INDUSTRIAL MARKETERS

by
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D/2003/2376/01

Advertising budgeting practices of Belgian Industrial Marketers.

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(submission date : friday 20 december 2002)

Abstract

The author reports on the results of a survey of a random sample of 102 belgian industrial companies, which measured which budget setting processes companies use, how they set budgets and the resulting budget composition. The objective of the study was first to compare the results with international practice, and second to try to explain their budgeting practices as a function of company, product and market characteristics measured in the same survey. The major conclusions are mixed : on the negative side, we found a lot of heterogeneity in process usage, budget setting rules and media shares, but not much variance that could be explained with the available independent variables. On the positive side, we discovered that belgian companies are 'well behaved' according to expectations based on Marketing Theory. Their use of specific communication objectives is for example based on sound principles. One of the major conclusions is that product type is the major determinant of the communication behavior of companies, together with company size, while market factors play a minor role. These results clearly underline the need for effect measurement studies that would help companies set the size of their communication budgets and allocate these budgets over specific media.

Advertising budgeting practices of Belgian Industrial Marketers.

Objectives of the research

Ideally marketing-mix decisions should be based on the availability of response parameters, telling managers what kind of result (in terms of sales or other dependent variables) to expect from an action, for example an investment in communications. Unfortunately, these response parameters or functions (see [2],[10]) are generally not available to Industrial Marketers, due in part to the lack of available data (market shares, communication expenditures of competitors) and the lack of sufficient observations (small number of customers). One of the few notable exceptions would be the research done by Lilien and others on the effects of trade shows ([3],[6],[7]), but we are still far away from making generalizations about effects of investments in different media.

As the next best alternative, one might try to discover the 'common wisdom' shared by Industrial Marketeers w.r.t. communication budgeting and planning, in order to develop norms that other companies could follow, in the absence of guidelines based on research (the Advisor 2 model being a good and well-knwon example, see [11]. More specifically we will try to explain which variables have an impact on the communication decisions of companies, in order to check whether belgian companies behave as expected by Marketing Theory. The eventual lack of significant relationships might also point to the areas where communication managers would need most support from research. Do companies know when and where to spend money, and do they know how much to spend ? If this kind of research does not produce positive results, one might conclude that there is either a lack of common wisdow, or that the communication behavior of companies is even more complex.

Although at first sight one might be led to believe that communication expenditures do not deserve the same amount of research they receive in the fast moving consumer goods area, 3% of sales (which is the M/S ratio we found in this study) is still a huge amount economy-wide, which still deserves to be spent as well as possible. One might also expect these B2B communication expenditures to increase in the future, due to the 'discovery' of the Marketing concept by Industrial Marketeers.

A last objective was to compare the practices of belgian companies with international practice (covering the period 1974-1993, for which published results are available).
The decisions we focus on are : use of a specific budgeting process, budget setting rules and budget allocations over different media.

Previous research about budget setting methods

We have found a number of studies reporting the use of budget setting methods (see Table 1), although we discovered that these results are quite hard to compare. The studies mentioned use different sampling methods (different population definition, different ways of drawing a sample, different sample sizes), different questioning, definitions (sometimes price cuts are counted as a promotion budget) and presentation of results (for example not everyone mentions the same budgeting methods). Because of these large differences in methodology, we abandoned the idea of comparing across studies the frequency of use of methods, but instead we ranked the resulting percentages. We could expect the ranks of usage frequency would give more reliable and comparable results. Table 1 below gives an overview of the evolution of the importance of the different budget setting methods over time.

(insert table 1)

Conclusions :

It is not simple to compare all studies, since definitions of methods are not always comparable, and some methods are not even mentioned at all.
The differences between B2B and B2C markets are small. This means that both types of companies use the same methods as often, which is not surprising given the simplicity of these methods (one could argue that most companies don't use any sophisticated methods at all).

There seems to be a trend towards the use of more objective, but not necessarily more sophisticated methods : Objective & Task is becoming more popular at the expense of simpler methods (percentage methods or arbitrary methods). Affordability is still much in vogue, while the penetration of scientific modelling is slow. Belgian companies seem to have still to catch up with these international trends.

Methodology used in this study

We designed a questionnaire based on previous studies (for example [11] and [4]) and indepth interviews with Marketing Managers and B2B advertising agencies.
The items measured covered topics like : budgetting process in use, frequency of using specific budget setting methods, the marketing/sales ratio and the percentage share of different media in the total marketing expenditures for the major product of the firm.

Sample

We obtained 102 useable questionnaires, out of 150 sent, from industrial companies. The respondents were drawn via a systematic random sample out of a population of belgian metalworking and electronics companies. These industries represent a large industrial sector in belgium.
All B2C companies were eliminated from the population list.
Respondents'names were identified by telephone, which together with a follow-up call, also explains the high response rate.

Results

We will cover the results in 5 sections : (1) the budgeting process models used, (2) frequency of using Budget setting methods, (3) the M/S ratio and the allocation of the marketing budget across media, (4) an

analysis of the factors affecting these ratios and finally (5) an analysis of the relationships between all the variables in the study.

1. The Budgeting process

As can be seen, the top-down process is mentioned most frequently, in contrast with Piercy [16]. One has again to be careful in comparing the samples of both studies, since Piercy's study focused on medium-sized companies, while smaller companies (employing 50 or less people) make up 75% of our (random) sample.

(insert table 2)

The type of process used by a company can be explained by the level of involvement of the Marketing Department in the budgeting process and by company size. We will come back to this in the last section. The budgeting process itself has some impact on other aspects of communication strategy : a bottom-up process favours more the use of the Objective & Task method of budget setting, and also spending on Trade Shows, at the cost of the Sponsoring budget.

2. The budget setting methods in use

Most companies (59%) use basically no method at all (i.e. arbitrary and all-you-can-afford).

(insert table 3)

When looking at the relationship between the use of budgetting methods and budget allocation percentages, the conclusion is very simple : there is no relation at all. Whatever method is used, has no

effect on how much is spent on any medium. Although it is not simple to put forward any hypotheses, it is still a surprising result.

This would imply that managers, although some of them set budgets objectively (as we will see in the following sections, there are some acceptable reasons why managers use certain methods), they have no idea how to allocate this budget over the different media.

Which budget setting method is used, seems to depend on just one factor : the involvement of the Marketing department (favouring Objective and Task, and percent of sales).

Another interesting result was the negative correlation between the use of any budgetting method, and the amount spent on sponsoring : companies using any method(s) tend to spend less on sponsoring.

3. The ratio's.

Not surprisingly, Personal Selling gets the largest share of the budget, followed closely by Trade Shows (see Table 4)

It might come as a surprise to see the large share of Sponsoring. Of course this can be a catch-all category, containing expenses not easily allocated to other media, but from our face-to-face interviews and industry contacts, we know that especially smaller companies spend money on all sorts of event sponsoring, like sport events. This activity can be seen as a way of maintaining good relationships with neighbours and the job market. It is also considered as almost a moral obligation to support local activities (local football clubs for example).

What is also obvious in Table 4 is the large range of values. This in itself points towards a large variation in the communication behavior of companies. Some companies even spend almost their total budget in just one medium. Although one might hypothesize that smaller companies, having less to spend, have to concentrate their expenditures, statistical analysis does not support this : there is no correlation between size of company and the shares of the different media (trade shows being one exception : larger companies tend to spend more).

(insert table 4)

Are there any groups of companies with similar allocation behavior ?

We applied hierarchical clustering (Ward's method) to the 6 allocation variables (the variable TV/Radio was deleted due to small number of companies using these media) after deleting first 8 observations due to the abnormally high shares of certain media (more than 90% spent on 1 medium).
The resulting dendogram shows clearly 3 clusters. We thought the sample was too small to try splitting these 3 clusters into a larger number of clusters.

(insert table 5)

The first cluster appears to use non-personal media more, the second Personal Selling, and the third Trade Shows (important deviations are shown in bold).
When one tries to test for statistical differences between the three clusters for all the other variables used in the questionnaire, the number of significant differences is actually negligible. This already points towards the conclusion that although there is a lot of variability in budget allocation across companies, almost nothing of this variance can be explained.

4. Are media allocation percentages and the M/S ratio explainable by other variables ?

This analysis is comparable to the Advisor study [11]. Due to the large number of variables and the correlations between them, we chose to limit the analysis to univariate tests, testing for differences in the average allocations and M/S ratio's between levels of the (non-metric) variables.

(insert Table 6)

Discussion of Table 6 :

Note : the following variables (rows in table 6) are not shown, in order to save place and because there are no significant differences between the average percentages for the different values of : type of budgeting method, special product (product made for special applications or for general use in different industries), number of competitors, high price positioning, high quality positioning, Market Share Objective.

We will summarize the results of table 6 first by column (the media) and then by row (the independent variables).

1. Explaining differences in budget size and allocation

The M/Sales ratio :

* The M/Sales ratio is smaller if the product is bought more frequently, which is typical of customized components made by smaller companies for larger OEM's (see last section below). Given the type of product and company, this seems logical.
* The M/Sales ratio is smaller if the product is customized. This is expected, as one would assume that personal contact between supplier and buyer is important. These products also tend to be more specialized.
* The M/Sales ratio depends on the product class (as defined in traditional text books, see [8]): more is spent on industrial services, less on components. This again seems logical, since components are often made to order, while services tend to be standardized branded products, used in many industries, and requiring therefore more communication efforts.

* The M/Sales ratio is larger if the company is trying to increase the awareness of the firm's offerings or advertising a new product (which are similar communication objectives).
* The M/Sales ratio is smaller for larger companies : this result is in line with previous studies [11]. We could explain this finding by stating that smaller companies are faced with fixed access costs to media, which they have to amortize over a smaller sales base. This is confirmed by their lower spending on Trade Shows, which is a typical fixed cost medium.

Surprisingly, the M/S ratio does not depend on the implication of the Marketing Department in the budgeting process (something we would have expected), nor on the life-cycle stage (this last variable might contain measurement error in the case of a multiproduct firm with different products in different stages of the PLC).
As a note, we estimated the combined effect of these variables on the M/S ratio through regression analysis, but were only able to explain 25% of the variance. This still compares favourably with the results based on the PIMS data (which contain more observations and variables) [4]. For example, in [4] the regression for industrial components only explains 30% of variance.
Secondly, but maybe more logical, is the important effect of product characteristics on communication budgeting, something we might not realize in a Marketing world dominated by fmcg.
As a conclusion, one might state that belgian companies determine their M/S ratio as expected by common sense and Marketing Theory, although the number of influencing factors is small.

Explaining spending on specific media :

Spending on general magazines is smaller if selling to OEM's, and larger if the communication objective is Brand awareness. Spending on specialized magazines is only influenced negatively by 1 communication objective : announcing the launch of a new product. This is an unexpected result, amplified by the fact that spending on Trade Shows does not increase in that case. Could it be that companies exhibit at trade shows irrespective of their new product plans ?

Spending on direct mail, although an important slice of the communication budget, is unexplainable by any variable. We could at least have expected that a new product launch might imply more spending (if only to invite customers to a Trade Show). Or the use of an Objective & Task method might favour this medium because of the clear link between the task (sending mail to a specific people) and the budget (number of addressees).

Spending on Sponsoring and Trade Shows could almost be discussed together since a number of variables have opposite effects on spending in those two media. The following (binary) variables make companies spend **more** on Trade Shows and **less** on Sponsoring : the use of Bottom-up budgeting, the implication of the Marketing Department in the budgeting process, the complexity of the product, and the launch of a new product. **Less** is spent on Shows and **more** on sponsoring in the case of a company selling customized products to OEM's.

Spending on Trade Shows depends on some additional variables which do not impact Sponsoring :

* company size : larger companies spend more on shows
* companies selling through distribution channels spent more (this might be explained by the fact that smaller companies sell more direct)
* there is a link with the PLC : spending is large first, and dips afterwards, to increase again later. This is consistent with what some authors hypothesize ([9], p. 776).

Spending on personal selling is larger in the case of relationship maintenance (as a communication objective), and less when the communication objectives of the firm are awareness and image building. This is completely in line with expectations, and also explainable by the type of companies using relationship building more as a communication objective : smaller companies producing customized products for OEM's.
Our conclusion here again would be that although overall the communication planning behavior is according to expectations, not all behavior is explainable.

2. Summary of impact on media allocation by type of variable.

The different budget setting methods used have no significant effect on budget size and allocation. This is surprising, since one could formulate hypotheses about these effects. For example, one might assume that the All-you-can-afford method would result in lower spending, than the Objective and Task method (based on the premise that B2B companies tend to underspend). One might conclude from this finding that companies might know when to change spending, but not how much to spend in the first place.

The type of budgetting proces does not have a large effect on spending, except on Trade Shows, but company size is probably the underlying reason for this : larger companies use more the Bottom-up approach to budgeting, and spend more on shows. The same reasoning holds for the implication of the Marketing department.

Product characteristics are important determinants, and also indirectly (see below) because they determine the kind of B2B customers companies sell to.

Communication objectives used by industrial companies have the expected impact on budget allocation : companies correctly associate magazines to building brand awareness, personal selling to relationship building and trade shows to product introduction and information. Market Share as a communication objective has no impact, which is hardly surprising due to the lack of effect measurement in B2B Marketing, and even the lack of market share information in many B2B markets.

5. Overall model showing the pairwise relationships between all the variables in the study

Figure 1 summarizes all the **significant** relationships we found (analyses based on chi-square tests in the case of non-metric variables), also those within the set of independent variables. These interrelationships are important because they tell a story about the type of B2B companies in the sample, and the links

between these variables. They also show how heterogenous B2B markets can be (even within a subset of the overall population of industrial companies).

The major conclusions are :

1. Type of product is an important discriminator.

Companies selling vertical products (needed in a specific industry) :

need to spend less effort on educating their customers (since everyone speaks the same language, knows each other, news spreads faster), even if the product is complex.

use less communication objectives (like awareness, new product announcment, image building)

use more a Market Share objective in communication (because the market is clearly defined, and so Market Share is meaningful)

use more a direct sales approach instead passing through distributors.

have less often a Marketing department (due to their smaller size).

sell less frequently capital goods (meaning they are companies making customized components as subcontractors)

It should be noted on the other hand that this variable has no impact on spending.

2. Size of company matters less than Market Share rank.

Size of company matters only in the sense that larger industrial companies have more often a Marketing Department, and involve it more in their budgeting process, but size does not per se have an impact on the use of communication objectives (except image building, which is more used by larger companies). Market Share rank displays more significant relationships with communication strategy : the lower the rank, the less frequent the company uses any communication objective.
The type of budgeting proces used is not related to size or share rank.

(Insert Figure 1 here.)

Legend for figure 1 :

(1) : If the Marketing department is involved in the budgeting process, the Objective & Task and % of sales methods are used more often.
(2) : A Bottom-up process favours an Objective and Task method.
(3) : A Bottom-up process is used more often when the Marketing Department is involved (Size of company might be the underlying factor for relation 2 and 3).
(4) If the Marketing Department is involved, the following communication objectives are used more often : brand awareness, image building and product introduction. In other words, Marketeers know better what they want to achieve.
(5) : The Marketing Department is more often involved if the company sells a non-specialized or standardized product through a distribution channel.
(6) : Relations 4 and 5 explain why the same variables in 5 above determine which communication objectives are used.
(7) : Company size affects the involvement of the Marketing department in the budgeting process.
(8) : Larger companies use more often a Bottom-up approach.
(9) Small companies sell more customized products directly to OEM customers.
(10) Small companies use less often communication objectives.
(11) Small companies use more a low price strategy.

(12) When selling Specialized products , companies use less often communication objectives.

(13) When selling Standardized products (typically by larger companies to end-users), companies stress more often brand awareness and product introductions as communication objectives.

(14) Producers of small capital equipment use more often brand awareness as an objective, producers of raw materials less.

(15) Marketing departments, when involved, favour spending on Trade Shows.

(16) Has been discussed earlier in the text.

In this overview, a number of trends appear :

1. Product characteristics and company size are major determinants of communication planning behavior, especially since both are also correlated with each other.
2. Other aspects of company strategy and market characteristics are weakly related to communication planning.
3. As we said before, the link between the use of communication objectives and spending is weak.

Overall conclusions

When looking at media allocations, we noticed quite some variance or heterogeneity between companies. This variance is very difficult to explain statistically with the variables included in the study. One might be tempted to formulate alternative hypotheses like the following : since communication budgets are small, there is no research budget available for effect measurement, no knowledge about effectiveness and perhaps as a result random spending. These companies might also tend to concentrate their spending in 1 medium (selected without good reasons). Finally, since not that much money is involved, and due to habit formation, companies with small budgets might have no interest in optimizing spending.

The Marketing behavior of industrial companies is explainable in the sense that companies adapt in the expected direction their use of communication objectives to product and customer characteristics.

What is more problematic however, is that when it comes down to decide on a specific budget size and media allocation, companies have much more trouble deciding what is optimal in their specific situation. Non-rational arguments must take over : this explains the sizable amount that some companies spend on sponsoring, which typically is a medium chosen due to the personal involvement of managers (think about sport events).

Product type explains a lot, because very different products are used in very different situations : some are targeted to narrow segments, some are custom-made. Since B2B Marketing is by necessity more centered around the physical product, it is logical that communication practices are also dictated by these same factors.

Suggestions for further research

We think that B2B Marketeers could urgently use more effect measurement studies as an aid to select an objective and media, and to determine the 'optimal' amount spent. This body of literature is growing too slowly. We need more studies that can provide Marketeers with evidence about the impact of spending on buying behavior. Examples of such studies are [3],[6], and [7].

Secondly the link between communication decisions and strategy needs to be established clearly. We think communication managers have at this moment no clear idea about the influence of strategy variables (like own strategic choices, life cycle stage, market characteristics.) on the way they should make communication.

This research, like others, reveals the many problems managers face. Now is the time to try to solve them, by providing them with some solid research-based decision rules.

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Table 1 : overview by year of the frequency of use of different budget setting methods (numbers are ranks ; '1' meaning most used) (last column : this study's results)

Study	[18]	[18]	[5]	[5]	[15]	[15]	[12]	[12]	[12]	[12]	[14]	[12]	[12]	[12]	[12]	[13]	
Year	1974	1974	1975	1975	1977	1977	1982	1982	1982	1982	1984	1987	1987	1987	1987	1993	2002
Type of product	B2B	B2C	B2B	B2C	B2B	B2C	B2CF	B2CS	B2BF	B2BS	BOTH	B2CF	B2CS	B2BF	B2BS	BOTH	B2B
Objective &Task	4	4			4	4	3	3	2	2	1	1	1	1	2	1	3
All-you-can-afford	3	3	3	3	2	2	2	2	1	1	3	2	2	2	1		2
% of sales	1	1	1	1	1	1	1	1	3	3	2	3	3	3	3	2	4
Competition			4	4			5	5	5	4	4	5	5	5	4		5
Model	5	5	5	3	5	5	4	4	4	4	6	4	4	4	4		6
No method	2	2	2	2	3	3					5					3	1

F : Fast moving goods, S : slow moving goods.

Table 2 : The budgeting process models used in the sample.

	Percent
bottom-up	6.9
bottom-up/top-down	27.5
top-down/bottom-up	20.6
top-down	45.1
Total	100.0

Table 3 : Frequency of use of budgeting methods in the sample

	Often used	Sometimes	Never	Total
Arbitrary	31.4	41.2	27.5	100.0%
All-you-can-afford	27.4	31.3	41.2	100.0%
Percent-of-sales	13.7	28.4	57.8	100.0%
Competitive parity	4.9	25.4	69.9	100.0%
Objective-and-task	26.5	30.4	43.1	100.0%

Table 4 : Average M/S ratio and shares of media in total marketing budget (based on total sample)

	Mean	Std deviation	Min	Max
Personal Selling	25.6	29.3	0	99.00
Trade shows	23.1	23.4	0	85.00
Specialized magazines	18.3	19.0	0	100.00
Direct Mail	14.6	17.7	0	80.00
Sponsoring	11.6	19.5	0	99.00
General magazines	5.7	14.7	0	90.00
Radio/TV	.4	1.9	0	15.00
Marketing/sales ratio	3.1	3.3	0.001	18.000

Table 5 : Results of clustering the sample on the 6 allocation variables (averages)

	Cluster 1 means (N=38)	Cluster 2 means (N=32)	Cluster 3 means (N=21)
General magazines	**7**	1	0.5
Specialized magazines	**24**	11	19
Direct Mail	**25**	7	12
Sponsoring	**18**	7	4
Trade shows	13	19	**60**
Personal Selling	11	**56**	5

Table 6 : Variables having a significant effect ($p < 0.05$) on M/S ratio and on media allocations (group means)

	M/Sales ratio	% general magazines	%specialized magazines	% direct mail	% sponsoring	% trade shows	% personal selling
Budgeting process type	ns	ns	ns	ns	Top-down 14.9 Bottom-up 5.4	Top-down 17.8 Bottom-up 33.2	ns
Implication of Marketing Department	ns	ns	ns	ns	Yes 5.4 No 13.7	Yes 31 No 20	ns
Does customer need education ?	ns	ns	ns	ns	Yes 6.1 No 13.9	Yes 26.5 No 15.1	ns
Is it a frequently purchased product ?	Yes 2.5 No 3.7	ns	ns	ns	Yes 15.9 No 7.2	ns	ns
Is it a customized product ?	Yes 2.3 No 3.6	ns	ns	ns	Yes 16.5 No 8.1	Yes 17.4 No 26.9	ns
Is the product sold through distributors ?	ns	ns	ns	ns	ns	Yes 30.2 No 19.2	ns
Number of customers larger than 100	ns	ns	ns	ns	Yes 13.3 No 6.0	ns	ns
Is market share rank below top 10	ns	ns	ns	ns	ns	Yes 16.3 No 26.5	ns
Stage in PLC (growth, mature, decline)	ns	ns	ns	ns	ns	Growth 32.1 Mature 18.0 Decline 26.1	ns
Product class	Services 5.1 Components and MRO's 1.9	ns	ns	ns	ns	ns	ns
Is product sold to OEM customers ?	ns	Yes 2.5 No 7.5	ns	ns	Yes 17.2 No 8.2/0	ns	ns
Size of company (3 classes)	Small 3.9 Medium 3.0 Large 2.2	ns	ns	ns	ns	Small 12.7 Medium 26.7 Large 31.2	ns
Product information communication objective	Yes 3.8 No 2.4	ns	ns	ns	Yes 6.5 No 16.1	Yes 29.4 No 17.2	ns
Brand awareness communication objective	ns	Yes 24 No 15.7	ns	ns	ns	ns	Yes 16.9 No 29.9
Relationship Maintenance communication objective	ns	ns	ns	ns	ns	ns	Yes 31 No 17.7
New product launch communication objective	Yes 4.3 No 2.4	ns	Yes 13.9 No 21.20	ns	Yes 6.4 No 14.4	ns	ns
Image Building communication objective	ns	ns	ns	ns	ns	ns	Yes 16.7 No 28.3

Figure 1 : Overview of all significant relationships between variables in the study.